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EXAMINER

MORGAN, ROBERT W

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
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8 *Ex parte* MICHAEL C. BURKE and RONALD K. RYAN
9

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11 Appeal 2008-005851
12 Application 09/267,176
13 Technology Center 3600
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16 Decided: January 14, 2010
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20 Before HUBERT C. LORIN, ANTON W. FETTING, and
21 BIBHU R. MOHANTY, *Administrative Patent Judges*.

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23 FETTING, *Administrative Patent Judge*.
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26 DECISION ON APPEAL
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STATEMENT OF THE CASE

Michael C. Burke and Ronald K. Ryan (Appellants) seek review under 35 U.S.C. § 134 of a final rejection of claims 1, 3-9, 11-14, 18-21, and 43-61, the only claims pending in the application on appeal.

We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

We AFFIRM.

The Appellants invented a way of automatically managing energy costs using a utility processing system by automatically optimizing energy consumption, purchasing, and generation decisions based on energy usage and pricing data (Specification 1:9-12).

An understanding of the invention can be derived from a reading of exemplary claims 44 and 1, which are reproduced below [bracketed matter and some paragraphing added].

44. A system for managing energy cost, comprising:

[1] a server communicating with at least one utility meter,

wherein said server is configured to

[2] record metering data received from said utility meter via a network,

[3] forecast a forecast load based on the received metering data from the utility meter,

[4] create a current load shape from said metering data, and

[5] compare the current load shape to a load shape from a prior time period based on historical data;

wherein the server is further configured to

[6] receive pricing data from a plurality of sources of power from the network,

[7] determine an optimal consumption decision,

and

1 [8] determine a price baseline for a combination of
2 at least two of the plurality of sources of power
3 from

4 price point data of the plurality of sources of
5 power received over the network,
6 the forecast load and
7 a percentage of the forecast load which will
8 be met by each of the plurality of sources of
9 power; and

10 wherein the server is further configured to

11 [9] deliver the optimal consumption decision to a
12 customer over the network.

13 1. A method for automatically managing energy cost using
14 metering data and pricing data, the method comprising the steps
15 of:

16 [1] receiving a customer's metering data from a utility meter,
17 wherein the metering data is electronically transmitted
18 from the utility meter;

19 [2] receiving pricing data from a plurality of sources of power,
20 wherein the pricing data is received electronically over a
21 network;

22 [3] forecasting a forecast load based on the received metering
23 data from the utility meter,

24 wherein said forecasting includes the steps of
25 creating a current load shape from said metering
26 data, and
27 comparing the current load shape to a load shape
28 from a prior time period based on historical data;

29 [4] determining a price baseline for a combination of the
30 plurality of the sources of power,

31 wherein the price baseline is determined by
32 price point data for the plurality of sources of
33 power,
34 the forecast load and
35 a percentage of the forecast load which will be met
36 by each of the plurality of sources of power;

37 [5] determining an optimal consumption decision
38 based on the received pricing data and the forecast load,

wherein the consumption decision selects at least two of the plurality of sources of power to thereby reduce utility costs, and
wherein said optimal consumption decision
is calculated using an optimal cost curve derived from an optimization algorithm applied to the pricing data and the forecast load and
derives a percentage of the forecast load that will be met by each of the plurality of sources of power; and
[6] delivering the optimal consumption decision to the customer via the network.

This appeal arises from the Examiner's Final Rejection, mailed April 16, 2007. The Appellants filed an Appeal Brief in support of the appeal on September 17, 2007. An Examiner's Answer to the Appeal Brief was mailed on December 6, 2007.

PRIOR ART

The Examiner relies upon the following prior art:

Takriti	US 6,021,402	Feb. 1, 2000
Johnson	US 6,047,274	Apr. 4, 2000

Andrew Bruce et al., *Forecasting load-duration curves*, 13 Journal of Forecasting, 545 (Nov. 1994) (<http://proquest.umi.com/pqdweb?did=23260&sid=16&Fmt=3&clientid=19649&RQT=309&VName=PQD>)(last visited Aug. 15, 2005) (hereinafter “Bruce”).

REJECTIONS

Claims 1, 3-9, 11-14, and 18-21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce.

Claims 43-61 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce.

ISSUES

The issue of whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 1, 3-9, 11-14, and 18-21 under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce turns on whether a system that would allow either one or multiple providers reads on the claims in the instance of multiple providers, what degree of automation is required by the claims, and whether the billing statement in Johnson provides the price baseline required by the claims.

The issue of whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 43-61 under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce turns on the above issues.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Johnson

01. Johnson is directed to an auction service that stimulates competition and facilitates the consumer's ability to make economic choices between providers. Providers supply energy to end users resulting from a bidding process between participating providers, administered by a bidding service entity through operation of a central processor referred to as a bidding moderator (the "Moderator"). Johnson 6:67-6:10.

02. Each of the Providers transmits to the Moderator the rate it is willing to charge over some particular period of time. The Provider may change its bids as often as it likes. The Moderator

1 collects this bid information from all the Providers, sorts it
2 according to the rules of the auction and transmits selected
3 portions of this information to an end user control computer.
4 Johnson 6:20-56.

5 03. The Moderator collects end users' actual usage data from end
6 users' meters and processes this data to create periodic usage
7 reports transmitted to Providers. Each Provider of electric power
8 manages its power generation and provisioning activities in
9 response to periodic reports of end users' actual usage transmitted
10 and can adjust its power generating or provisioning capacity to
11 reflect higher or lower expected usage as these periodic reports are
12 received. Providers manage their power generation activities by
13 adjusting their bids from time to time, depending on capacity
14 utilization or other energy availability factors. Johnson 6:57-
15 7:51.

16 04. Johnson's meter data collection is automatic. Johnson 9:4-13.

17 05. Johnson's Moderator transmits to each control computer such
18 rate information and provider selection data as is relevant to the
19 end user associated with that control computer. Johnson 9:30-33.

20 06. Each control computer selects the Provider offering the lowest
21 rate (or best economic value) at that time to the end users
22 associated with that control computer after applying any decision
23 rules formulated and inputted by the control computer's
24 administrator and transmits such selection to the Moderator.
25 Johnson 9:34-40.

1 07. The Moderator performs all of the functions the control
2 computer would otherwise perform for those end users not
3 associated with a control computer. Johnson 9:41-46.

4 08. Johnson's Moderator transmits to each end user a consolidated
5 billing statement, based on the actual energy usage data received
6 by the Moderator from that end user's meter during an entire
7 billing cycle and the winning bid data relating to all selected
8 Providers who supplied electric power or natural gas to this end
9 user during that billing cycle. Johnson 10:23-34.

10 *Takriti*

11 09. Takriti is directed to scheduling generating units of a utility
12 while taking into consideration power trading with other utilities
13 and the stochastic load on the system. The system allows the user
14 to provide multiple load forecasts and to vary the fuel price
15 between the different scenarios and the different periods of the
16 planning horizon. Takriti 4:58-64.

17 *Bruce*

18 10. Bruce is directed to forecasting electricity load-duration curves.
19 The approach first forecasts the load curve and then uses the
20 resulting predictive densities to forecast the load-duration curve.
21 Bruce 1:Abstract.

22 *Facts Related To The Level Of Skill In The Art*

23 11. Neither the Examiner nor the Appellants has addressed the level
24 of ordinary skill in the pertinent arts of systems analysis and
25 programming, energy conservation and energy management
26 systems design. We will therefore consider the cited prior art as

1 representative of the level of ordinary skill in the art. *See Okajima*
2 *v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he
3 absence of specific findings on the level of skill in the art does not
4 give rise to reversible error ‘where the prior art itself reflects an
5 appropriate level and a need for testimony is not shown’”)
6 (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755
7 F.2d 158, 163 (Fed. Cir. 1985)).

8 *Facts Related To Secondary Considerations*

9 12. There is no evidence on record of secondary considerations of
10 non-obviousness for our consideration.

11
12 PRINCIPLES OF LAW

13 *Claim Construction*

14 During examination of a patent application, pending claims are
15 given their broadest reasonable construction consistent with the
16 specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In*
17 *re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004).

18 Limitations appearing in the specification but not recited in the claim
19 are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d
20 1364, 1369 (Fed. Cir. 2003) (claims must be interpreted “in view of the
21 specification” without importing limitations from the specification into the
22 claims unnecessarily).

23 Although a patent applicant is entitled to be his or her own
24 lexicographer of patent claim terms, in *ex parte* prosecution it must be
25 within limits. *In re Corr*, 347 F.2d 578, 580 (CCPA 1965). The applicant
26 must do so by placing such definitions in the specification with sufficient

1 clarity to provide a person of ordinary skill in the art with clear and precise
2 notice of the meaning that is to be construed. *See also In re Paulsen*, 30
3 F.3d 1475, 1480 (Fed. Cir. 1994) (although an inventor is free to define the
4 specific terms used to describe the invention, this must be done with
5 reasonable clarity, deliberateness, and precision; where an inventor chooses
6 to give terms uncommon meanings, the inventor must set out any
7 uncommon definition in some manner within the patent disclosure so as to
8 give one of ordinary skill in the art notice of the change).

9 *Obviousness*

10 A claimed invention is unpatentable if the differences between it and
11 the prior art are “such that the subject matter as a whole would have been
12 obvious at the time the invention was made to a person having ordinary skill
13 in the art.” 35 U.S.C. § 103(a) (2000); *KSR Int’l Co. v. Teleflex Inc.*, 550
14 U.S. 398, 406 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

15 In *Graham*, the Court held that the obviousness analysis is bottomed
16 on several basic factual inquiries: “[(1)] the scope and content of the prior art
17 are to be determined; [(2)] differences between the prior art and the claims at
18 issue are to be ascertained; and [(3)] the level of ordinary skill in the
19 pertinent art resolved.” 383 U.S. at 17. *See also KSR*, 550 U.S. at 406.

20 “The combination of familiar elements according to known methods is likely
21 to be obvious when it does no more than yield predictable results.” *Id.* at
22 416.

23 ANALYSIS

24 *Claims 1, 3-9, 11-14, and 18-21 rejected under 35 U.S.C. § 103(a) as*
25 *unpatentable over Johnson, Takriti, and Bruce.*

Claims 43-61 rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce.

The Appellants argue these claims together, relying on the arguments in support of claim 1 for the remaining claims as well. Accordingly, we treat all claims as a group and select claim 1 as representative of the group.

37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Examiner found that Johnson described the limitations of claim 1 except for the claimed optimal consumption decision being calculated using an optimal cost curve derived from an optimization algorithm applied to the pricing data and forecasting load and the claimed forecasting a forecast load based on the received metering data from the utility meter, wherein said forecasting includes the steps of creating a current load shape from said metering data, and comparing the current load shape to a load shape from a prior time period based on historical data. The Examiner applied Johnson and Bruce for these limitations (Ans. 3-8).

The Appellants contend that (1) the auction system taught by Johnson is not the automatic determination and delivery of an optimal energy consumption decision to a customer as taught by the instant application (Br. 7-8); (2) the auction system taught by Johnson does not require use of two or more sources of power/utility providers/energy providers for determining and delivering the optimal consumption decision, as taught by the instant application (Br. 9-10); (3) the auction system taught by Johnson does not determine a price baseline from two or more sources of power as required by the current invention (Br. 11); (4) the auction system taught by Johnson does not teach use of a (derivation of a) percentage of forecasted customer energy needs that will be met by each of the at least two sources of power as

1 required by the current invention (Br. 12-13); and (5) the auction system
2 taught by Johnson does not determine an optimal consumption decision from
3 the selection of at least two sources of power as required by the current
4 invention (Br. 13-14).

5 We disagree with the Appellants. As to argument (1), the Examiner
6 responded that Johnson's control computer selects the best Energy
7 Providers; an Energy Auction System ("EAS") receives information such as
8 price rates from the Moderator and each control computer automatically
9 selects the Provider offering the lowest rate (or best economic value). (Ans.
10 23). These facts are in accord with Johnson (FF 05 & 06).

11 The Appellants contend that bidders are inserted into the process (Br.
12 8). We take this to mean that the Appellants contend that the actions of
13 human bidders preclude automation of the determination. This argument is
14 not commensurate with the scope of the claim. The only recitation of
15 automation in the claim is in the preamble.

16 "[A] claim preamble has the import that the claim as a whole
17 suggests for it." *Bell Communications Research, Inc. v. Vitalink*
18 *Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995). Where a
19 patentee uses the claim preamble to recite structural limitations of his
20 claimed invention, the PTO and courts give effect to that usage. *See id.*;
21 *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251,
22 1257 (Fed. Cir. 1989). Conversely, where a patentee defines a
23 structurally complete invention in the claim body and uses the preamble
24 only to state a purpose or intended use for the invention, the preamble is
25 not a claim limitation. *See Bell Communications*, 55 F.3d at 620; *Kropa*
26 *v. Robie*, 187 F.2d 150, 152 (CCPA 1951).

1 Claim 1 is a method claim and the steps define a complete invention
2 in the claim body. Thus, the preamble is not a claim limitation. Even were
3 such automation a claim limitation, the Appellants have not shown that the
4 execution of each of the steps in claim 1 as practiced in the applied prior art
5 as is not automatic, because the data reception, forecasting, and data
6 determination steps are clearly performed by the computers. Whether these
7 steps rely on data from bid submissions is simply outside the scope of each
8 of these steps. Thus, the Appellants' argument is based on a step not within
9 the scope of claim 1.

10 As to arguments (2)-(5), each is based on the recitation of plural
11 sources of power in claim 1. The Examiner responded that Johnson
12 describes such plural sources (Ans. 24-25). This is in fact the case (FF 08).
13 The Appellants' argument that Johnson does not require multiple sources is
14 not commensurate with the scope of the claim. Limitations [2], [4], and [5]
15 are the limitations reciting multiple sources. Although the art must describe
16 multiple sources, or at least show such were predictable, to read on claim 1,
17 nothing in claim 1 affirmatively tests for a single source and affirmatively
18 causes cessation of the process if only a singular source is found. Thus,
19 although Johnson's singular source implementation would not read on claim
20 1, Johnson's plural source implementations would. The Appellants also
21 argue that Johnson teaches away from the use of multiple sources (Br. 10).
22 This contention is unpersuasive for the reason that Johnson explicitly
23 provides for multiple sources. "A reference may be said to teach away
24 when a person of ordinary skill, upon reading the reference, . . . would be led
25 in a direction divergent from the path that was taken by the applicant." *In*
26 *re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir. 2001), (quoting *Tec Air, Inc. v.*

1 *Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1360 (Fed. Cir. 1999)). Simply that
2 there are differences between two references is insufficient to establish that
3 such references teach away from any combination thereof. *See In re Beattie*,
4 974 F.2d 1309, 1312-13 (Fed. Cir. 1992).

5 As to argument [2], the Appellants further argue that Johnson is at
6 odds with the implementation disclosed in the Specification, citing four
7 examples (Br. 10). Limitations appearing in the specification but not recited
8 in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*,
9 343 F.3d 1364, 1369 (Fed. Cir. 2003).

10 As to argument [3], the Appellants also argue that Johnson's
11 consolidated billing is not a price baseline (Br. 11). The Appellants contend
12 that billing statements only look back and the price baseline is used for
13 forecasting. Again, the Appellants' argument is not commensurate with the
14 scope of the claim. Claim 1 uses the received pricing date from limitation
15 [2], not the price baseline from limitation [4], for determining the optimal
16 decision in limitation [5]. The only recitation of forecasting in claim 1 is in
17 limitation [3], using meter data rather than pricing data.

18 As to argument [4], the Appellants contend that Johnson does not
19 describe the use of such a percentage of forecasted needs. The Examiner
20 found that the provision of multiple providers on a consolidated billing
21 statement implied a percentage that each provider supplied (Ans. 4). We
22 take the Appellants' argument to mean that Johnson does not explicitly
23 describe using a percentage number of a forecast load. The recitation of the
24 percentage of forecast load occurs in limitation [4] alone. This percentage is
25 used in determining the price baseline. Limitation [4] does not specify when
26 the determination occurs or how the determination is derived. We find that

1 because a consolidated billing statement as in Johnson (FF 08) necessarily
2 describes the portion that each supplier applied to the total billing, such a
3 portion is simply some percentage of the total. Thus, the use of each
4 supplier's portion is implicitly the use of the percentage of that portion
5 toward the total. Again, limitation [4] does not specify how the
6 determination is derived, so an indirect implicit use of such a percentage
7 would meet the broad limitation of "is determined by." Although the billing
8 statement is based on actual consumption, this consumption is in turn based
9 on the forecast consumption that is used in Johnson's bidding process.
10 Again, limitation [4] does not specify when the determination is derived, so
11 whether Johnson determines its consolidated billing after the forecast period
12 when actual data is available does not negate Johnson's description of
13 limitation [4].

14 As to argument [5], the Appellants contend that Johnson does not
15 determine an optimal consumption decision. The Examiner found that
16 Johnson did so by selecting the lowest bids (Ans. 5). We find that Johnson
17 did in fact select the lowest bids (FF 06). The determination of an optimal
18 consumption decision is in limitation [5]. The Examiner relied on Takriti
19 and Bruce to describe the particular derivation recited in limitation [5] and
20 the Appellants have not contended that those references fail to describe such
21 a derivative technique. The Examiner relied on Johnson to describe using at
22 least two providers in such a determination of some consumption
23 optimization technique. We find that selecting a low bid for a particular
24 amount of commodity is a consumption optimization technique,

1 optimized for finding the lowest bids. As we found *supra*, Johnson
2 describes doing so with multiple providers. Thus, we find argument [5]
3 unpersuasive.

4 5 CONCLUSIONS OF LAW

6 The Appellants have not sustained their burden of showing that the
7 Examiner erred in rejecting claims 1, 3-9, 11-14, and 18-21 under 35 U.S.C.
8 § 103(a) as unpatentable over Johnson, Takriti, and Bruce.

9 The Appellants have not sustained their burden of showing that the
10 Examiner erred in rejecting claims 43-61 under 35 U.S.C. § 103(a) as
11 unpatentable over Johnson and Bruce.

12 13 DECISION

14 To summarize, our decision is as follows:

- 15 • The rejection of claims 1, 3-9, 11-14, and 18-21 under 35 U.S.C. §
16 103(a) as unpatentable over Johnson, Takriti, and Bruce is sustained.
- 17 • The rejection of claims 43-61 under 35 U.S.C. § 103(a) as
18 unpatentable over Johnson and Bruce is sustained.

19 No time period for taking any subsequent action in connection with
20 this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

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22 AFFIRMED
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Appeal 2008-005851
Application 09/267,176

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